

Capstone Project Goals

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1 Background

Carbon is the design system for IBM Cloud products. It contains styles, components, and guidelines used for creating user interfaces. Our project focuses on design and implementation of a subset of Carbon Design Components - Carbon Charts, which features a library of charts built with D3 that update in real time with animations.

2 Goals of The Project

The goal of our project is to extend Carbon Charts and make it more accessible for users. We hope to do this by creating additional charts and adding features to increase usability, accessibility, improve aesthetics, and optimize components. The specific features we will be working on are discussed in section 2.

2.1 Service Goals

- Add screen reader support for improved accessibility. All charts should conform to the Web Content Accessibility Guidelines (WCAG).
- Right-To-Left reading support. This will increase accessibility by adding compatibility for right to left languages like Arabic.
- Add Bubble, Area and Combo chart types.
- Threshold underlay support for all axis charts.

- All new contributions should conform to IBM Carbon's code style. This will be automatically verified by the official IBM Carbon linter.
- Zoom and scroll functionality. These features will allow users to view and analyze chart data in additional ways.
- Save charts to image. This will allow users to easily save their chart locally.
- Bundle size optimization. The final shipped code bundle should have a minimal memory footprint.
- Improve the development operations pipeline. Automated test suites and faster build systems should be implemented.
- Implement a micro-controller receiving input from different sensors. The data is then displayed by the charts.

2.2 Revenue Goals

Due to the free and open-source nature of this project, no revenue goals have been set.

2.3 Legal Goals

- All dependencies and libraries used should be compatible with the Apache License 2.0.
- All contributor agreement documents must be read and signed by all members of this project. All conduct must conform to these agreements.

<https://www.w3.org/WAI/standards-guidelines/wcag/>